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ENTOMOLOGICAL NOTES DURING A TRIP TO LAKES HURON AND SUPERIOR.

BY THE EDITOR.

It was recently my good fortune to spend a very pleasant fortnight—from August 10 to August 24—on Lakes Huron and Superior, chiefly with a view to obtain a thorough rest from work of every description, and to enjoy the pure bracing air and splendid scenery of these inland seas. The greater portion of the time was spent on the steamboats *Algoma* and *Chicora*, and as most of the stoppages at the various ports were made at night, I had few opportunities for collecting insects. I remained over, however, for five days on the Canadian side at Sault Ste. Marie, and devoted as much of the time as I possibly could to the investigation of the insects of the neighborhood. During the summer of 1870, I also paid a short visit to the Sault, and passed a few days there and at Garden River, and Bruce Mines. On that occasion, as I accompanied the Bishop of Toronto on his Confirmation tour among the Indians, I had no opportunity to do more than pick up a few specimens here and there; these I shall mention, with the captives of this year, under their different localities. So few Entomological investigations have been made in that far-stretching north-western region, that I do not hesitate to occupy a portion of our space with an account of the little I have been able to do myself, and trust that it may be of interest to the reader.

LEPIDOPTERA RHOPALOCERA.

Pieris oleracea Boisd. (*P. casta*, Kirby).—Very common at Collingwood both last year and this; a few observed at Bruce Mines; not uncommon at Sault Ste. Marie. Taken on the north shore of Lake Superior by Agassiz's Expedition in 1848.

Colias philodice Godt.—Plentiful at Collingwood, Bruce Mines, and St. Joseph's Island; excessively abundant at the Sault.

Colias curytheme Boisd.—A single specimen observed at Bruce Mines; not uncommon at Sault Ste. Marie. This handsome orange butterfly was quite a prize to me, as I had never before seen it alive, and rarely in cabinets. Its habits appeared to be similar to those of *C. philodice*, but its flight was much more rapid; it hardly ever rested for more than an instant at a time, and could not be captured without a long and exciting chase. I was enabled, however, to obtain about a dozen specimens, with the assistance of some young friends at the Sault, who became speedily infected with my entomological ardor, and before I left, commenced to form collections for themselves. If they keep up the pursuit, they will no doubt be able to afford us, by and by, much valuable information respecting the insect fauna of the locality. Among the dozen specimens of *C. curytheme*, I only found one female; probably as the specimens were all fresh and in good order, the females do not appear till a few days later than the males.

Colias Keewaydin Edwards.—One male specimen taken at the Sault. I have little doubt that this is merely a variety of the preceding species. For description and admirable figures of both, see Edwards' *Butterflies of North America*, Part IV.

Danais archippus Cramer.—But very few specimens seen at the Sault; a single one flew across the steamer when on Georgian Bay, fifteen or twenty miles from the nearest land. Taken on the north shore of Lake Superior by Agassiz's Expedition.

Argynnis cybele Fabr.—A single specimen taken at Sault Ste. Marie.

Argynnis aphrodite Fabr.—Sault Ste. Marie; abundant. North shore of L. Superior (Agassiz).

Argynnis myrina Cramer.—Sault Ste. Marie; very abundant. North Shore of L. Superior (Agassiz).

Grapta interrogationis Fabr.—Sault Ste. Marie; a single specimen.

Grapta progne Cramer.—Sault Ste. Marie; rare.

Vanessa antiopa Linn.—St. Joseph's Island and Sault Ste. Marie; not at all common, compared with its usual abundance in the Southern parts of Ontario.

Vanessa Milberti Godt.—Sault Ste. Marie; rare.

Vanessa J-album Boisd. and Lec.—Bruce Mines, St. Joseph's Island, and Sault Ste. Marie; very abundant. North shore of Lake Superior (Agassiz).

Pyrameis huntera Drury.—Sault Ste. Marie; rare.

Pyrameis cardui Linn.—Larva found feeding on thistle at the Sault, but no specimen of the imago seen.

Polyommatus Americana Harris.—Sault Ste. Marie; very abundant.

Hesperia ———?—A species quite new to me, with very distinct white spots on the under side. I have not yet had time to look up authorities for its determination. It appeared to be quite common on St. Joseph's Island and at Sault Ste. Marie.

The foregoing list includes all the species of butterflies that I observed. The only others found by the Agassiz Expedition on the northern shores of Lake Superior were *Colias pelidne?* Boisd.; *Colias chrysotheme?* Esper. (probably the species that I met with): *C. Eurytheme* Boisd.); *Limenitis arthemis* Drury.; and *Melitæa cocyta* Cramer.*

LEPIDOPTERA HETEROCERA.

Deilephila chamænerii Harris.—A single specimen hovering about Petunias and other flowers in a garden at Sault Ste. Marie. North shore of Lake Superior (Agassiz).

Eudryas grata Fabr.—One specimen; Garden River.

Lycomorpha pholus Drury.—Several specimens on lichen-covered rocks at Bruce Mines.

Hypoprepia fucosa Hubn. (*Gnophria vittata* Harris). Bruce Mines and Sault Ste. Marie; several specimens.

Utetheisa bella Linn.—Bruce Mines; one specimen.

Arctia Saundersii Grote.—Garden River; two specimens.

Samia cecropia Linn.—A large number of the larvæ of this moth were observed last summer on a young plum tree at Collingwood.

Acronycta acericola Guen.—Larva found feeding on Cornel at Sault Ste. Marie.

Nephelodes minians Guen.—Attracted by light, Sault Ste. Marie.

Agrotis jaculifera Guen.—Garden River.

Graphiphora baja Gmel.—Sault Ste. Marie.

Erastria carneola Guen.—Sault Ste. Marie.

Plusia balluca Geyer.—Sault Ste. Marie.

Plusia simplex Guen.—Sault Ste. Marie.

Plusia ——?—Two specimens of a species quite new to me, and which I have not yet determined; Sault Ste. Marie.

* Agassiz's Lake Superior, page 392.

Catocala concumbens Walk.—Two specimens, apparently a variety of this species; Sault Ste. Marie. They were captured flying in the day time.

A few more moths, chiefly small species, were taken at various points, but have not yet been determined, from want of leisure.

I may mention that I saw at Collingwood, in a lady's drawing-room, a specimen of the gigantic moth *Erebus odora* Linn., that had been captured a few years ago in the neighborhood. This makes the third specimen that, so far as we know, has been taken in Canada.

I shall endeavour to give a list of the Coleoptera and other insects taken, in a future number of this journal.

MICRO-LEPIDOPTERA.

BY V. T. CHAMBERS, COVINGTON, KY.

[Continued from page 58.]

LITHOCOLLETIS.

7.—L. virginiella. N. sp.

Silvery white; apical half of the anterior wings pale golden; there is a long, pale golden basal streak situated *just within the costal margin, and strongly dark margined towards the dorsal margin, and extending to the pale golden of the apical portion of the wing.* In the pale golden portion are four silvery costal and two silvery dorsal streaks, all dark margined internally; the first dorsal and first costal streaks opposite, and both very oblique, and almost confluent in the middle of the wing; second dorsal opposite the second costal. Apical spot black; hinder marginal line, at the base of the ciliæ, dark brown; ciliæ silvery. *Alar. ex.* $\frac{3}{16}$ *in.*

The larva is cylindrical, small, first segment (after the head) largest, and tapering thinner to the anal segment. Very pale greenish, with a transverse dark brown macula on top of each segment. It is another instance of a larva of the first group mining the upper surface of the leaf. It mines the leaves of the Ironwood or Hornbeam (*Ostrya virginica*). The mine is a very white blotch, flat at first, but finally the leaf is completely folded upwards.

There are five species of *Lithocolletis* mining the leaves of *O. Virginica*, two of which have been described by Dr. Clemens, and two others in my collection are yet to be described. This species is smaller than any of those mentioned in my former communication, and differs from them in the larval state: the differences from them in the imago are indicated by the italics.

Kentucky—not abundant.

Since my former communication I have had *L. Clemensella* (*Ante*, p. 57), from mines on the under side of the leaves of the sugar maple (*A. saccharinum*), identical with those of *L. lucidicostella* Clem., and which I supposed were the mines of that species; but *I think* that the pupa of *L. Clemensella* inhabits an ovoid cocoon of frass. As the exclusion of a larva from its mine for the purpose of describing it, necessitates the death of the larva, and there are thus two species in mines exactly alike, it follows that Dr. Clemens may have described the larva of *L. Clemensella* as that of *L. lucidicostella*.

Since then I have also taken *L. caryæ-albella* in Wisconsin. No doubt the other species mentioned also occur there, as their food plants all thrive as far north as Green Bay.

ERRATUM.—For *L. tiliacella ante*, p. 56, read *L. tiliæella*.

SECTION B.

Div. 1.—Anterior wings golden, saffron, orange-reddish or brownish-yellow.

Sub-div. a, with an apical spot.

*With a basal streak.

†*Without fasciæ, but with dorsal and costal streaks.*

8.—*L. Ostryæfoliella* Clem., loc. cit. *supra.*

9.—L. *Obscuricostella* " " "

I have found both of these species in Kentucky, though the former is rather rare. Both mine the leaves of the Ironwood (*Ostrya Virginica*). *L. Obscuricostella* has the basal streak dark margined. *L. Ostryæfoliella* has it unmargined; and there are other differences between them. Both are small; *Al. ex.* less than ¼ inch. Larvæ of first (cylindrical) group mines on the under surface.

10.—*L. robiniella* Clem., *loc. cit.*

Argyromiges pseudacaciella Fitch., *5th Rep., Sec. 335.*

Argyromiges Morrisella ? " " " *336.*

Argyromiges Uhlerella ? " " " *337.*

An examination of a large series of specimens shows, I think, that *A. Morrisella*, *A. Uhlerella*, and *A. pseudacaciella*, are merely variations or worn specimens of the same insect, which, having been previously described by Dr. Clemens in an English publication (THE ENTOMOLOGIST), should be called *L. robiniella*. There is some variation in the ornamentation of the species. In some the apical spot is circular; in others it is a short streak rather than a spot; there is a difference in the intensity and extent of the brown coloring of the dorsal margin of the wings, and sometimes the first dorsal streak (or rather that described as such by Dr. Clemens), is divided by a black streak on the dorsal margin so as to make it almost V-shaped. In all, the basal portion of the dorsal margin is black, and in this black portion (near the basal ¼) is a paler (or cinereous) dorsal spot or streak, which is between the first dorsal streak of Clemens' and the base. Dr. Clemens placed this species in the section having "no basal streak." But the black dorso-basal portion above mentioned is bordered on the fold by a paler, rather cinereous, median basal streak, which curves towards the dorsal margin, and unites with the cinereous dorsal spot. Sometimes, and in some lights, both this streak and spot are indistinct or invisible, but in others they are distinct, and sometimes the streak is, at the base, distinctly white. *Al. ex.* ¼ inch. Common. Wisconsin, Kentucky.

The larva is cylindrical, and mines the leaves of the Locust (*Robinia pseudacacia*). Dr. Clemens records it as mining the under side only, but I find it about as frequently mining the upper as the under side, and have frequently bred it from both mines. This is another instance of a cylindrical larva mining the upper surface. In the multitude of larvæ from the under surface that I have examined, I have found no variation in larvæ of the same age, and none are marked with maculæ; whilst usually, though not always, the larva from the upper surface has a distinct dark brown macula on top of each segment. The mine upon the upper surface is also rather smaller, and is usually on the midrib, and

the leaf is more folded. But I have not been able to detect any difference between the Imagines.

Dr. Clemens also records it as mining the leaves of *Amphicarpæa monoica*, or Hog pea-nut; but my botanical friends tell me that *A. monoica* is not found in this locality, and I have not met with it.

LOCUST LEAF MINERS.

What is *Anacampsis robiniella* Fitch. *5th Rep., Sec. 334.?*

Dr. Fitch says that the mine is white blister-like, and on the underside of the leaves of the locust. I quite concur with Dr. Clemens that this is the mine of *L. robiniella*, *supra*, and that there is no other similar mine upon the under side of these leaves. But there is both upon the upper and under side of the leaves a *flat*, *pale yellowish* mine containing the larva described by Dr. Fitch as that of his *Anacampsis robiniella*. This larva is the same which I had before me as stated, *Ante* p. 54, and which, like Dr. Clemens, I supposed to be a *Lithocolletis* larva of the second (flat) group. In fact it is identical with the larvæ of that group in structure and appearance, except that the sides of the segments are perhaps a little more mammilated; and thus Dr. Clemens was in error in supposing that the flat larvæ were confined to the upper surface, for this mines both surfaces indifferently. It is pale green, with a line of dark green contents. The mine always remains flat, and the larva usually leaves it, and enters the pupa state on the ground in a cocoon, described by Dr. Fitch as being "a small, broad, oval cocoon, 0-18th in. long, and 0-12th in. thick," woven, however, of pale yellow instead of white silk, as stated by Dr. Fitch; sometimes, however, it pupates in the mine. The larva is of about the same length as the cocoon. Yet Dr. Fitch describes the Imago as having an expanse of 0-45 in.! Since the remarks at p. 54 *ante* were written, I have bred the imago from these cocoons, and instead of *Anacampsis robiniella*, I obtained an undescribed *Leucanthiza*, to be hereafter described as *L. ornatella*, and which for the richness and brilliancy of its tints is not surpassed by any insect known to me. It could not by any possibility be mistaken for *Anacampsis robiniella*. Dr. Packard (*Guide p. 349*), describes *Depressaria robiniella*, which can not possibly be the *Anacampsis*, and I propose hereafter to describe as *Depressaria pseudacaciella*, still another species, the *young* larva of which lives as a guest, or rather as an intruder, in the mines of *L. robiniella*, *Leucanthiza ornatella*, and *Parectopa robiniella*. (I have seen it cut its

way into the mines). But by no possibility could this species be mistaken for the *Anacampsis*, nor could *Parectopa robiniella*. It is therefore pretty evident that Dr. Fitch's *Anacampsis is composed of the mine of Lithocolletis robiniella, the larva of Leucanthiza ornatella, and of an unknown imago.* It cannot be supposed that Dr. Fitch mistook a *Lithocolletis* or a *Leucanthiza*, or any other insect included in *Argyromiges* Curtis, for an *Anacampsis*, which includes *Gelechia* and kindred genera. Dr. F. describes *Anacampsis robiniella*, and on the next page, *Argyromiges pseudacaciella*, and was therefore fully aware of the difference between the genera; and his *A. robiniella* is no doubt a *Gelechia* or closely allied thereto.

On two or three occasions I found in the mines of *Lithocolletis robiniella*, and in company with it, a much larger larva, of which I kept no description, and which I did not succeed in raising to the imago. It lived *in the mine* in a tubular passage or channel formed of frass, and may prove to be the larva of the lost *Anacampsis*. I know no other miners of the Locust.

INSECTS OF THE NORTHERN PARTS OF BRITISH AMERICA.

COMPILED BY THE EDITOR.

From Kirby's Fauna Boreali-Americana: Insecta.

(Continued from Page 32.)

[73.] 107. COLYMBETES TRISERIATUS, *Kirby*.—Length of body 7¾ lines. A single specimen taken. I have a specimen also from New England, taken by Professor Peck.

Body elliptical, rather depressed, underneath black, and covered with an infinity of branching or confluent wrinkles, as if scratched by a pin or needle. Head black, anteriorly testaceous, between the eyes is a pair of transverse red spots; antennæ and palpi testaceous, dusky at the tips: prothorax testaceous with an abbreviated, sub-bilobed, discoidal band; variously acuducted so as somewhat to resemble net-work: scutellum ferruginous, black at the base, very minutely and confluently punctured: elytra dusky, which colour, for they are really lurid or dirty yellow, is produced by an infinity of transverse black lines or furrows, but which at the lateral margin lose their blackness; besides these there are three rows of punctures arranged longitudinally but not regularly, the first

adjoining the suture, and the two others being discoidal; between the outer one and the margin, especially near the apex, are some scattered punctures; the epipleura, and sides of the fore-breast, are yellow: legs testaceous; thighs and tibiæ punctured.

This species is intermediate between *C. striatus* and *C. dolabratus*, with the former it agrees in the majority of its characters, particularly in the longitudinal rows of punctures, except that its sutural one is more perfect; and with the latter in the prothoracic band and the color of the legs. The transverse furrows of the elytra are rather deeper than those of the first-mentioned species, and not so deep as those of the last.

These insects, adding *C. fuscus*, may perhaps be regarded as forming a subgenus, whose common character is the peculiar sculpture of the elytra. [Synonymous with *C. sculptilis* Harris; a species taken in Canada.]

108. Colymbetes (Hydaticus) Rugicollis, *Kirby*.—Length of body 6 lines. Taken in Nova Scotia by Dr. MacCulloch.

[74.] Body rather obovate and depressed; underneath rufous cloudy with dusky. Head subrufous, dusky behind; antennæ and palpi yellowish, dusky at the tip; prothorax with the posterior angle acuminate, subrufous, dusky in the disk, posteriorly scratched longitudinally as if by a pin: elytra pale-yellow, thickly and minutely reticulated or vermiculated with black; lateral margin yellow, unspotted; epileura yellow; prosternum depressed. This species appears to represent *C. H. irroratus*.

109. Colymbetes (Hydaticus) MacCullochii, *Kirby*.—Length of body 5¾ lines. Several taken in Nova Scotia by Dr. MacCulloch.

Body obovate, depressed, glossy; underneath black, confluently punctured and wrinkled. Head posteriorly minutely punctured, black; nose, mouth, and its organs, and a band between the eyes pale yellow; antennæ pale with the joints above dusky at the tip: prothorax punctured, pale yellow, with a discoidal band, dilated at each extremity and surrounded by a black margin of the same colour: elytra black, sprinkled with innumerable pale-yellow dots; near to the apex is a pale, angular, undulated band, and beyond it a round white spot; the margin of the elytrum is paler than the rest: the three intermediate ventral segments of the abdomen have each a pair of roundish pale spots, one on each side; the four anterior legs are pale yellow. [Previously described as *Acilius Mediatus* Say—Ent. Works ii. 508.]

110. Dytiscus ooligbukii, *Kirby*.—Length of body: male. 1 inch

and 4 lines; female. 1 inch and 5 lines. A pair were taken by the Esquimaux Ooligbuk in the Great Bear Lake River. [75.] As this species was taken by the useful, worthy and honest Esquimaux Ooligbuk, I trust I may be excused for giving to it his name. [Previously described as *Dytiscus confluens* by Say—for description *vide* Say's Ent. Works ii. p. 554.—He gives the State of Maine as its habitat; it was taken on the north shore of Lake Superior by Agassiz's Expedition, and is now included in the list of Canadian Coleoptera. Its range, it will be observed, is thus a very wide one.]

[76.] 111. DYTISCUS HARRISII *Kirby*.—Length of the body 1 inch and 8 lines. One specimen taken in the journey from New York to Cumberland House.

Body black, underneath banded and clouded with pale chestnut. Head smooth; nose, upperlip, and palpi, reddish-yellow; the latter with the last joint dusky; between the eyes is an obscure, roundish, red spot; prothorax smooth, except an anterior transverse series of punctures which does not reach the sides; as in the preceding species it is surrounded by a broad reddish-yellow margin: sculpture of the elytra like that of *D. Ooligbukii*, etc., but not so grossly punctured at the apex; side reddish-yellow, the yellow stripe terminating in a fork or two branches, the upper one not consisting of dots as in *D. Marginalis*, etc., but entire and toothed: a reddish-yellow arch marks the dilated posterior coxæ, and the base of the abdomen is of the same colour; arms and thighs, pale chestnut, tibiæ and tarsi of the four posterior legs black: the lobes of the metasternum are remarkably obtuse. I have named this insect after a very eminent American Entomologist, Dr. T. W. Harris, who well merits such distinction. [One of our commonest Canadian species of large water-beetles. North shore of Lake Superior (Agassiz). A specimen in my cabinet flew in at an open window attracted by light, July 1, 1864.

[77.] 112. DYTISCUS *(Leionotus)* FRANKLINII *Kirby*. Plate ii. fig. 1. —Length of body 1 inch and 4 lines. A pair taken in Lat. 65°.

Male. Body oblong-ovate, glossy as if covered with varnish; underneath black spotted and banded with pale chestnut; above dark olive, in certain lights of a beautiful olive-green. Head with a very few minute, scarcely discernible, punctures; antennæ chestnut; mandibles and palpi black; nose, upperlip, margins of the prothorax, and side of the elytra, dusky yellow: prothorax distinctly channelled, surrounded within the

margin with an irregular series of punctures, interrupted at all the angles, and in the middle anteriorly and posteriorly: elytra sculptured, as in the two preceding species, except that there are several very obsolete rows of flat granules, scarcely discernible, between the suture and the first row of punctures; and there is no yellow oblique band or gleam near the apex: legs black, with the arms and intermediate thighs dusky or dusky lurid; the lobes of the metasternum very acute, more than usually diverging; incurved a little at the apex.

Female. Head more visibly, though still very minutely, punctured; prothorax minutely punctured; elytra more coarsely punctured at the apex; legs dusky lurid, posterior tibiæ darker, tarsi black; scapulars, and parapleuræ grossly punctured; angle of the mesostethium wrinkled; posterior coxæ lightly, but not thickly, punctured; lobes of the metasternum very acute, not incurved on the apex. [Considered by LeConte to be a variety of *D. Confluens* Say.]

FAMILY GYRINIDÆ.

[78.] 113. CYCLINUS ASSIMILIS *Kirby*.—Length of body 5½ lines. Two specimens taken in lat 54° [79.] Body depressed, obovate; underneath glossy, black, slightly bronzed; upperlip minutely punctured; front wrinkled between the eyes; nose impressed on each side: prothorax anteriorly on each side with a transverse series of punctures parallel with the margin, and with a slight discoidal transverse impression; at the base obtusangular and somewhat wavy: elytra with nine very slightly impressed furrows, the interstices of which are minutely punctured; at the apex the elytra are wavy; epipleura black-bronzed: legs and anus testaceous. This species approaches very near to *Gyrinus Americanus* belonging to the same genus, of which I at first regarded it as merely a variety, but upon comparing it with with the specimen preserved in the Linnean cabinet, it appears clearly distinct. This species is smaller, bronzed above, and the interstices of the furrows are without punctures. [Regarded by LeConte as synonymous with *Dineutes (Gyrinus) Americanus* Linn. This species is common in Canada. LeConte (Pro. Acad. Nat. Sci., Philada., Dec. 1868, p. 367), says that it is "our most abundant species, usually known as *apple bug;* extends from Lake Superior to Texas, and from Maine to Kansas."]

114. GYRINUS IMPRESSICOLLIS *Kirby*.—Length of body 4 lines. Taken in Canada by Dr. Bigsby.

Body glossy, black underneath, above blue-black. Head a little bronzed; nose transversely impressed, wrinkled; frontal impressions large and deep: prothorax with a deep anterior transverse impression, reaching nearly from side to side, in the centre of which is also a deep punctiform impression, and behind it on each side two others, but wrinkled and more shallow; on each side also is a large gibbosity or boss: elytra nearly oblong, with eleven rows of shining bronzed punctures; at their apex the punctures are scattered, the margins also are bronzed; epipleura black; the tip of the elytra is very obtuse and almost truncated: legs rufous. This species is very near *G. marinus*, but it is much larger, and is sufficiently distinguished from it by the deep furrow or channel that runs quite across the prothorax, its more prominent bosses, and its impressions. In *G. marinus*, also, the punctures at the tip of the elytra are not scattered, but mark out a crescent-shaped area; and the apex itself is not so obtuse. [Referred to *G. borealis* Aubé, by White. (Brit. Museum Cat. 45), but probably incorrectly.]

[80.] 115. GYRINUS ÆNEUS *Leach.* — Length of body 2½ lines. Taken in Canada by Dr. Bigsby. Very like the preceding species, but much smaller, the transverse impression of the nose and the frontal impressions are not so deep; that of the prothorax is not so conspicuous, and there are no lateral bosses; the elytra are much narrower at the apex, where, as in *G. Marinus*, a crescent is marked out by punctures.

116. GYRINUS VENTRALIS *Kirby.*—Length of body 2⅔ lines. Two specimens taken in Lat. 54°.

Nearly related to *G. aeneus*, but the whole prone surface of the body, the epipleura of the elytra, and the legs, are ferruginous; in which particulars it resembles *G. lineatus;* it is, however, much smaller than that species, the punctures in the rows are more conspicuous, and the elytra have no bronzed stripes. ["A beautiful species, easily known by its larger size and more brilliant iridescent surface; in one specimen the under surface is nearly black."—LeConte, *loc. cit.* p. 368. Taken in Canada by Mr. Pettit at Grimsby, Ont.; also on north shore of Lake Superior by Agassiz's Expedition. New York to L. Superior (LeConte).]

[81.] 117. GYRINUS ANALIS *Kirby.*—Length of body 3 lines. One specimen taken in Lat. 54°.

Near the preceding, but larger, punctures of the rows larger: breast bones black; mouth, sides of the forebreast, anus, and legs, rufous; the

remainder of the underside of the body, piceous: side-covers bronzed with a piceous tint. [Not *G. analis* Say.—Ent. Works ii. 520.]

118.—GYRINUS MINUTUS *Fabr.*—Length of body 2 lines. A single specimen taken in Lat. 65°.

Variety B. Body above blue black, with the sides, particularly of the prothorax and elytra, bronzed; underneath piceous, with the lobes of the metasternum, anus, and legs, rufous: epipleura rufo-piceous. In other respects it precisely resembles the European specimens. [*Vide* Le-Conte, Pro. Acad. N. S., Phila., Dec. 1868, p.p. 370 and 372.]

[FAMILY STAPHYLINIDÆ.]

[86.] 119. PÆDERUS RIPARIUS *Fabr.*—Length of body 3 lines. Several taken in Lat. 54°.

Head, breast, two last joints of abdomen, base of the tibiæ and apex of the thighs, black: prothorax, legs, and four first segments of the abdomen testaceous: elytra dark blue; antennæ dusky. [Probably an erroneous determination for *P. littorarius*, Grav.]

120. LATHROBIUM PUNCTICOLLE, *Kirby.*—Length of body 5 lines. A single specimen taken in Lat. 54°.

[87.] Body black, rather glossy, hairy except the prothorax. Head obovate, minutely and thickly punctured; mandibles, palpi, and what remains of its mutilated antennæ, dark chestnut: prothorax an oblong square with all the angles rounded; punctured, but not very thickly, with scarcely any smooth longitudinal space: elytra longer than the prothorax, thickly punctured, of a dark chestnut: legs maghogany, cubit armed with a short wide tooth or prominence on the inner side at the base, the four first joints of the hand are dilated, indicating probably that the specimen is a male. This appears to be the representative of *L. dentatum*, F, which it nearly resembles, but the elytra are considerably longer, the colour of the legs is darker, and the humerus, or anterior thigh, is proportionally smaller and has no tooth. [Taken in Canada.]

121. LATHROBIUM GRAVENHORSTII *Kirby.*—Plate ii. fig. 2.—Length of body 4½ lines. Two specimens taken in Lat. 54°.

This species a good deal resembles the preceding, but the palpi, mouth, scape of the antennæ, and legs, are testaceous, the remainder of the antennæ is darker; mandibles chestnut. Head oblong: anterior angles of the prothorax scarcely rounded; a distinct intermediate longitudinal smooth space adjoining which is a series of punctures strikingly distin-

guishing this species from *L. puncticolle*, the sides of the prothorax are covered with scattered punctures: the tip of the segments of the abdomen, ventral as well as dorsal, is testaceous. [Synonymous with *Cryptobium pallipes* Grav.—a species taken in Canada.]

122. LATHROBIUM [CRYPTOBIUM] BICOLOR *Grav.*—Length of body 4⅔ lines. Taken in Canada by Dr. Bigsby.

[88.] Body testaceous, hairy. Head oblong, wider than the prothorax, black, thickly punctured; mandibles and other oral organs dusky-rufous; antennæ nearly as long as the prothorax, of the same color but paler at the base and apex: prothorax punctured with a smooth longitudinal intermediate space: elytra thickly punctured: abdomen black, anus testatceous. Gravenhorst describes Knoch's specimen, which also came from North America, as having dark chestnut thorax, elytra and anus; in the specimen here described they are of the same color with the legs. The difference, as they agree in other respects, is probably accidental. [Common in Ontario.]

123. GYROHYPNUS ASSIMILIS *Kirby.*—Length of body 9 lines. Two specimens taken in Lat. 54°.

This species approaches very near to *G. ochraceus*, but is more slender in proportion to its length. Body black and glossy. Head rather larger than the thorax, behind the eyes are some rather large scattered punctures; antennæ and palpi rufous; neck rufo-piceous; prothorax piceous, with a triple series of punctures on each side leaving a discoidal smooth space; the dorsal ones consist of seven or eight punctures, and the intermediate ones are really a continuation of the dorsal, since by the intervention of a puncture or two both are united so as to form a figure resembling a bishop's crosier; the lateral series consists of a very few points, not easily seen; near the anterior angle the elytra are scarcely longer than the prothorax, punctured, with some of the punctures arranged in rows and others scattered; from the humeral to the inner apical angle, they are internally yellowish-red, and externally blackish: legs yellowish-red. [Previously described by Say—Ent. Works ii. 567—as *Xantholinus cephalus*. Taken in Ontario.]

ERRATA.—In the last number of the CANADIAN ENTOMOLOGIST, vol. iii., page 70, in 8th line from top, for "larva" read "chrysalis;" and in 11th line from top, for "larvæ" read "chrysalids."

ACCENTUATED LIST OF CANADIAN LEPIDOPTERA.

BY E. B. REED, LONDON, ONTARIO.

(Continued from page 151, vol. ii., CAN. ENT.)

*** For rules of pronunciation see page 122, vol. ii., CAN. ENT.

NOTE.—Page 150, vol. ii., for *Interrogātiō'nis read Interrogatiō'nis.*

JUNONIA—*Junō'nia*, named after the ancient goddess Juno, the insect having its wings adorned with eyes like the plumage of the peacock, the favorite bird of Juno.

———— COENIA—*Coe'nia*, from the Greek word *Koinos: common or kindred*, this genera being closely allied to that of *Vanessa* or *Pyrameis.*

LIMENITIS—*Limenī'tis*, a Greek word meaning *harbour-keeping*, an epithet applied to several divinities. O. C.

———— URSULA—*Ur'sula*, a virgin and martyr of the 5th century.

———— ARTHEMIS—*Ar'themis*, the Greek name for the goddess Diana. O. C.

———— DISIPPUS—*Disip'pus*, probably from the Latin *disipo: to scatter;* this insect being very common and having been for some time confounded with *Archippus*, another wide-spread species.

CHOINOBAS—*Choino'bas*, from two Greek words *kiōn*, *bainō*, signifying *snow frequenters*, so named by Boisduval on account of this genus being common to the most wintry parts of North America.

———— BALDER—*Bal'der*, probably from the German *Bald*, *Early.*

NEONYMPHA—*Neonym'pha*, a Greek word signifying *newly married.*

———— EURYTHRIS—*Eu'rythris*, probably meant for *Eu'rytis*, a patronymic of Iole, the daughter of Eurytus, King of the Eubæan town Œchalia.

———— BOISDUVALLII—*Boisduval'lii*, named after Dr. Jean Alphonse Boisduval, the celebrated French Entomologist, the possessor of the finest known collection of Lepidoptera.

EREBIA—*Ereb'ia, erebus*, the region of darkness; from the dark colors of this genus. O. C.

——— NEPHELE—*Neph'elē*, the wife of Athamas, King of Thebes.

——— DISCOIDALIS—*discoidā'lis*, so called by Kirby from the marks on the anterior wing like the Grecian *discos*.

SATYRUS—*Sat'yrus*, a Satyr, a rustic Deity half man half goat. O. C.

——— ALOPE—*Al'opē*, daughter of Cercyon, King of Eleusis.

THECLA—*Thec'la*, Virgin and martyr. O. C.

——— AUGUSTUS, *Augus'tus*, named by Kirby after Augustus, one of the Esquimaux attendants of Sir John Franklin's Expedition.

——— FALACER—*Fal'acer*, from the Greek *Sphalax, buckthorn*, on which the larva feeds.

——— NIPHON—*Nī'phōn*, from the Greek *gnīphōn, a niggard*, the usual name for the old misers in the new attic comedies; probably thus named by Godart on account of its extreme rarity.

——— MOPSUS—*Mop'sus*, a soothsayer and King of Argos.

——— ACADICA—*Acad'ica*—Acadia, the former name of Nova Scotia, part of the Dominion of Canada.

——— LÆTA—*Læ'ta*, from the Latin *lætus, joyful*.

POLYOMMATUS—*Polyom'matus*, from the Greek *polyommatos*, signifying *many-eyed*.

——— PORSENNA—*Porsen'na*, a King of Etruria, friendly to the Tarquins.

AMERICANA, *Amerīca'na*, peculiar to America.

——— THOE—*Thoē*, from the Greek *thoös: nimble, active*, signifying the quick darting flight of the perfect insect.

——— EPIXANTHE—*Epixan'thē*, from the Greek *epixanthus: yellow-brown*, alluding to the tawny color of the species.

——— LUCIA—*Lu'cia*, Lycia, a country of Asia Minor.

——— DORCAS, *Dor'cas*, derived from the Greek *derkomai:* to *gleam* or *flash like the eye*, in allusion to the quick, jerky flight of the insect.

MISCELLANEOUS NOTES.

PERSONAL.—We beg to acknowledge with many thanks the receipt of some eggs of *Saturnia Eglanterina* Boisd., from Prof. Jas. Behrens, of San Francisco, Cal. The eggs arrived in perfect safety, and will, we trust, produce some good specimens. We shall be glad to receive from Prof. Behrens any Entomological material for our pages. ED. C. E.

IN No. 4 of the CANADIAN ENTOMOLOGIST, Mr. Couper makes some remarks in reference to the larvæ infesting acorns. Having just succeeded in breeding the imago I can throw some light on the subject. On October 11, 1870, I happened to observe that the acorns of a red oak (*Quercus rubra*) contained larvæ of some sort, and, making an examination, I found many of them containing from one to four short stout footless grubs, that I supposed were the larvæ of some species of *curculionidæ*. Others in which a hole had been made and carefully closed again, contained Lepidopterous larvæ, varying greatly in size in different specimens. Whether there were parasites, or merely took possession of the acorns after they were abandoned by the curculio larvæ, I was unable to decide. Taking home a couple of quarts of the acorns, I put about half of them in a glass-covered box with a couple of inches of earth at the bottom, and the remainder in a *dry* box with glass sides. In both cases the larvæ began directly to leave the acorns, those in the box containing earth immediately burrowing out of sight, while those in the other box continued to crawl from side to side until cold weather came on, by which time all the acorns were abandoned except those containing lepidopterous larvæ: Soon after cold weather set in, the unprotected curculio larvæ shrivelled up and died. By digging at different times in the earth in the other box, I ascertained not only that the grubs were alive, but that they remained in the larval state during the winter, spring, and first part of summer. In the latter part of July, 1871, the first pupa was obtained, and on August 20th I turned up an imago and also a larva. On the 23rd day of August the first mature imago made its appearance, since when they have continued to come out at the rate of one a day. The species is without doubt the *Balaninus nasicus* Say, of the Canadian list of Coleoptera; but Dr. Horn informs me that it cannot be referred to any of our named species. I have live specimens dark in color and somewhat mottled. I put a branch with a few acorns on it into the cage with them, and saw a couple shortly

after paired on an acorn. I am anxious to see them at work puncturing the acorns. As I set out with the sole hope of breeding the curculio, I paid but little attention to the moths, two or three of which came out but, with one exception, were dead and spoiled when found.—J. PETTIT, Grimsby, Ont.

AN INTELLIGENT SPIDER.—I was much interested lately in observing the ingenuity of a large spider which had constructed his web between a ladder and the wall of an outhouse in my yard. The web was planned on a magnificent scale, the supporting cable on the lower side requiring to be at least four feet in length. A piece of thick twine, about eighteen inches long, happened to be suspended to the wall by a tack, at a convenient height from the ground, and the spider, noticing the twine, had contrived to make it form part of the support of the web, by fastening his cable to the end of it, and then pulling it tight. The twine was drawn out almost horizontally by the ingenious spider, who certainly showed something a little beyond instinct in thus taking advantage of circumstances.—G. J. BOWLES, Quebec, P. Q.

A NEW INSECT-ENEMY OF TURNIPS AND RAPE.—You are perfectly aware that I do not possess any scientific knowledge in Entomology, but as you have so laudably set apart a portion of the *Entomologist* for recording facts connected with economic Entomology, I know that you will be pleased to receive any trustworthy testimony on behalf of such. Last evening my brother and I, while walking across a piece of newly-sown rape *(Brassica Napus)*, discovered that thousands of minute insects—so minute that my pocket lens was not sufficiently powerful to reveal the order they belonged to—were puncturing and feeding on the cotyledons, or first leaves; and so quickly did they spring off that I had to return home for some gum and a sheet of white paper, which, when well gummed and hastily turned over the plant, secured about a score specimens, and these I have to-day forwarded to you in a box, the bottom of which had also to be thickly gummed to keep the little skipping fellows in. Though they may turn out to be the commonest of all known insects, these are certainly new to me as being destructive to rape and turnips; for, although I have farmed extensively for twenty years, I never noticed them before; and I think you will agree with me that I do not always "go about with my eyes shut." I know that little pest the turnip-fly, *(Altica Nemorum)*, only too well; but these appear equally destructive and

equally nimble. Will you therefore kindly tell me their names, and what you know of their economy?—Henry Reeks, East Woodhay, May 24, 1871. [Ans.—These minute insects were so clogged with the gum introduced for the purpose of preventing their escape, that I cannot decide with certainty on their names: I believe, however, that they are a species of Poduridæ, perhaps Smynthurus fuscus. I should much like to see living specimens; they may be sent safely in a glass tube. The fact of such insects being destructive to rape and turnips is quite new to me, and is very interesting.] —*The Entomologist, July, 1871.*

Entomologists in France.—The second seige, by which Paris has suffered so much, has spared the persons of entomologists, but has utterly annihilated or greatly damaged many of their collections and libraries. Dr. Laboulbene, who resided in the rue du Bac, had a part of his house caught by the flames, and a great part of his library destroyed. M. Boulard's collection was shattered to atoms by shells, and many collections have suffered great injury from the partial explosion of the Luxembourg powder-mills; happily a tenth part only of the powder exploded: had the project of exploding the whole been successful, the collections in the Museum itself must have been destroyed. M. de Marseul's collection is uninjured. Almost all the provincial entomologists of France are in safety, and eagerly pursuing their favorite study, a solace in their troubles. At Strasbourg the fine collection of M. Gauber is safe, and likewise those of MM. Koechlin and Zuber-Hofer at Dornach, while that of M. Guenee, at Chateaudun, has entirely escaped the destruction of the town by the Prussians, who have taken both the collections and the books of M. Estienne, from the same town.—*Petites Nouvelles Entomologiques.*

REMITTANCES.

Received since issue of Vol. 3, No. 4.

J. W. B., Indianapolis, Ind., $2; E. L. G., Brooklyn, N. Y., $1; Dr. A. D. H., Chattanooga, Ten., $1. Messrs. D. Bros., Montreal, $1; L.W., Grimsby, Ont., $1; Kingston Branch, Ont., $5; R.V. R., Kingston, Ont., $1; J. Y., Brooklyn, N. Y., $2; Dr. J. H. S., Toronto, Ont., $3; Rev. N. D. Ste C., Nicolet, P. Q., $1; F. P. A., Cambridge, Mass., $1; H. F. B., Waterbury, Conn., $1; H. S. S., London, Eng., $1; Nat. Hist. Soc'y., Cincinnati, $1; V. T. C., Covington, Ky., $3; J. C., Kingston, $2.75; London Branch, Ont., $10; G. D. S., Boston, Mass., $1.

EXCHANGES, &c.,

The undersigned would be pleased to open communications with any Entomologist in Canada, United States or England with a view to exchanging specimens. Address JAMES COLWELL, care of A. CHOUN, Kingston, Ont.

THE undersigned would be pleased to correspond with Lepidopterologists (Southern and Western U. S. preferred), with a view to exchanges. Address EDW. L. GRAEF, 40 Court St., Brooklyn, N. Y., U. S.

LEPIDOPTERA, &c.—I have a collection of Birds' Eggs, Lepidoptera (including some from Florida) and Coleoptora, duplicates of which I should like to exchange, giving preference to the two first named.—JOSEPH E. CHASE, Lock Box 46, Holyoke, Mass.

An American Entomologist, who has made a speciality of Lepidoptera, would like to correspond with collectors in any part of the world.—Address H. K. Morrison, care of E. K. Butler, 68, Pearl-street, Boston, Mass.

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